



BBMP

BRUHAT BANGALORE MAHANAGAR PALIKE

TEST REPORTS
FIRST & PART BILL

**IMPROVEMENTS TO ROADS, DRAINS AND OTHER
DEVELOPMENTAL WORKS**

PACKAGE - 08

Name of Work: Restoration and Improvements of roads at MS Palya,
Aishwarya Bakery road, Giridhamanagara and surrounding areas in
Ward no- 03 of Yelahanka New town Sub division.
(PACKAGE NO-08).

BBMP/YNK/Pkg 8/2022-23/023A

Date: 18.06.2022

To,

The Executive Engineer,
Yelahanka Division,
Bruhat Bengaluru Mahanagara Palike (BBMP),
Bangalore - 560064

FREQUENCY AND QUALITY REPORT

Sub: Regarding Quality Report for the below mentioned work.

Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward No-03 of Yelahanka New town Sub division. (PACKAGE NO-08).

Sl. NO.	Description of Work	Unit	Quantity	No of samples tested	Standards
1	Providing and laying plain/reinforced cement concrete for side drains walls & bottom thickness 15cm using M20 nominal mix concrete	Cum	1461.04	29	Per 50 Cum
2	Providing TMT Bars Fe 500 steel reinforcement for RCC	MT	99.08	3	Per Dia of steel
3	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30	Cum	671.55	13	Per 50 Cum
4	Construction of Granular Sub-Base Grading V as sub base and drainage layer	Cum	509.21	1	Per 400Cum
5	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam	Cum	678.94	3	Per 200Cum

With respect to the above subject & name of the work, we have inspected the work and the Quantity and Quality of above mentioned items of the work was found to be completed satisfactorily for the 1st and Part bill.

For Nandi Consultants,
Kamala Nivasa,
1st main, 2nd Cross, Krushinagar, Shimoga 577204, Karnataka.

For Nandi Consultants,

[Signature]



9880770162, 9980160007



Date:

16.04.2022

TEST REPORT ON PHYSICAL PROPERTIES OF CEMENT

Name of Client:

Bruhat Bangalore Mahanagara Palike

Address:

Yelahanka Division

Package No:

Package - 08

Name of Work:

Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)

Name Contractor:

SRI SAI CONSTRUCTION

Name of PMC:

M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204

Date of Receipt:

14-03-2022

Location:

Bettahalli Layout 6th E Sub Cross (3)

Sampling :

Sample collected from the site and Tested

Sample Identification*:

Penna OPC 43 grade

Reference to BIS codes:

Test Method:

IS 4031(Part 1):1996(RA 2016) Determination Of Fineness By Dry Sieving

IS 4031(Part 3):1988 (RA 2019) Determination Of Soundness

IS 4031 (Part 4):1988 (RA 2019) Determination Of Consistency Of Standard Cement Paste

IS 4031 (Part 5):1988 (RA 2019) Determination Of Initial & Final Setting Time

IS 4031 (Part 6):1988 (RA 2019) Determination Of Compressive Strength

IS 4031 (Part 11):1988 (RA 2019) Determination Of Density

Specification :

IS 269 : 2015 Ordinary Portland Cement

Condition of sample:

Satisfactory

Date of test:

15.03.2022-12.04.2022

Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
1	Standard Consistency	28	%	Not specified	Not specified	Not specified
2	Initial Setting time	110	minutes	Min 30 minutes	Min 30 minutes	Min 30 minutes
3	Final Setting time	300	minutes	Max 600 minutes	Max 600 minutes	Max 600 minutes
4	Fineness by dry sieving	6.2	%	-	-	-
6	Soundness (Le Chatelier's Method)	1.5	mm	Max 10 mm	Max 10 mm	Max 10 mm
7	Density	3.17	g/cm ³	-	-	-

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Sl.No	Physical properties	Results	Units	Requirement as per IS 269: 2015		
				33 Grade	43 Grade	53 Grade
8	Compressive Strength					
	3 Days	26.5	N/mm ²	Min 16 N/mm ²	Min 23 N/mm ²	Min 27 N/mm ²
	7 Days	34.0	N/mm ²	Min 22 N/mm ²	Min 33 N/mm ²	Min 37 N/mm ²
	28 Days	46.5	N/mm ²	Min 33 N/mm ² , Max 48 N/mm ²	Min 43 N/mm ² , Max 58 N/mm ²	Min 53 N/mm ²

Remarks:

The tested sample is found to be satisfactory as it meets IS 269 : 2015 Specification standards

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Checked By:



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Date:

21.03.2022

TEST REPORT ON MECHANICAL PROPERTIES OF COARSE AGGREGATES

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division (PACKAGE NO-08)
Name Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Location: Bettahalli Layout 9th Main Road LHS
Sample Identification: 20mm down size Coarse Aggregate
Sampling: Sample collected from the site and Tested
Reference to BIS codes: Test Method:
IS 2386 (Part 1) 1963 (RA 2016) Particle Size And Shape CI 2
IS 2386 (Part 3) 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking
IS 2386 (Part 4) 1963 (RA 2016) Mechanical Properties
Specification:
IS 383 : 2016 Coarse And Fine Aggregate For Concrete
Condition of sample: Satisfactory
Date of test: 14.03.2022 to 19.03.2022

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM COARSE AGGREGATE:

Total weight taken: 5000 grams

Sl.No	Sieve Designation	Weight Retained In gms	Cumulative Weight Retained In gms	% Cumulative Weight Retained	% Passing	Requirement as per IS 383: 2016 Table-7 (CI 6.1 & 6.2)	
						Graded	Single-Sized
1	40 mm	0	0	0	100	100	100
2	20 mm	330	330	6.6	93.4	90-100	85-100
3	10 mm	2581	2911	58.22	41.78	25-55	0-20
4	4.75 mm	1723	4634	92.68	7.32	0-10	0-5
5	Pan	366	5000	100	0	---	---

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MECHANICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016
1	Flakiness Index (%)	15.90	Combined flakiness & elongation index shall not exceed 40 % for uncrushed or crushed aggregate
2	Elongation Index (%)	19.50	
3	Specific Gravity	2.77	-
4	Water Absorption (%)	0.50	-
5	Aggregate crushing strength (%)	25	For Aggregates to be used in concrete for wearing surfaces, (such as runways, roads, pavements, tunnel lining carrying water, spillways and stilling basins) Max 30 %
6	Aggregate Impact Value (%)	24	For Aggregates to be used in concrete for wearing surfaces, (such as runways, roads, pavements, tunnel lining carrying water, spillways and stilling basins) Max 30 % For Aggregates to be used in concrete other than for wearing surfaces. Max 45 %

Remarks:-

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement with respect to above tests conducted, where as the gradation conforms to Graded aggregate.

Checked by:

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Date:

21.03.2022

TEST REPORT ON PHYSICAL PROPERTIES OF FINE AGGREGATE

Name of Client: Bruhat Bangalore Mahanagara Palike
 Address: Yelahanka Division
 Package No: Package - 08
 Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division (PACKAGE NO-08)
 Name Contractor: SRI SAI CONSTRUCTION
 Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
 Date of Receipt: 14-03-2022
 Location: Bettahalli Layout 8th Cross Road
 Sampling: Sample collected from the site and Tested
 Sample Identification*: M-Sand
 Reference to BIS code: Test Method:

IS 2386 (Part 1) : 1963 (RA 2016) Particle Size And Shape Cl 2
 IS 2386 (Part 3) : 1963 (RA 2016) Specific gravity, density, voids, absorption and bulking
 IS 2386 (Part 4) : 1963 (RA 2016) Mechanical Properties
 Specification:
 IS 383 : 2016 Coarse and fine aggregate for concrete

Condition of sample: Satisfactory

Date of test: 14.03.2022 to 19.03.2022

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF FINE AGGREGATE:

Total weight taken: 1000 grams

SL.No	Sieve Designation	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383 : 2016 Table-9, (Cl-6.3)				Remarks
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV	
1	10 mm	0	0	0	100	100	100	100	100	The tested Sample confirms to Grading Zone- II
2	4.75 mm	51	51	5.1	94.9	90-100	90-100	90-100	95-100	
3	2.36 mm	126	177	17.7	82.3	60-95	75-100	85-100	95-100	
4	1.18 mm	197	374	37.4	62.6	30-70	55-90	75-100	90-100	
5	600 micron	187	561	56.1	43.9	15-34	35-59	60-79	80-100	
6	300 micron	179	740	74.0	26	5-20	8-30	12-40	15-50	
7	150 micron	195	935	93.5	6.5	0-10	0-10	0-10	0-15	
8	Pan	65	1000	100.0	0	---	---	---	---	

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PHYSICAL PROPERTIES

Sl.No	Tests	Result	Requirements as per IS 383 : 2016 Table-3, (CI-5.7)
1	Specific Gravity	2.67	2.1 to 3.2
2	Material Finer than 75 μ (%)	8.5	-
3	Fineness Modulus	2.86	-
4	Water Absorption (%)	2.03	5% Max

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 383 : 2016 Specification/Project Requirement.

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Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm ²)	Tensile strength (N/mm ²)	TS/YS ratio	Elongation percent on gauge length		
2	RD TMT Fe 550	2/1a	10	0.614	555	643	1.16	16.5	-	-
	RD TMT Fe 550	2/1b	10	0.619	-	-	-	-	No Rupture or Crack Visible	-
	RD TMT Fe 550	2/1c	10	0.616	-	-	-	-	-	No Rupture or Crack Visible

Sl. No	Sample Identification	Sample ID No	Nominal size (dia in mm)	Mass per meter (kg/meter)	TENSILE STRENGTH				Bend Test	Re Bend Test
					0.20 % proof stress/ yield stress (N/mm ²)	Tensile strength (N/mm ²)	TS/YS ratio	Elongation percent on gauge length		
3	RD TMT Fe 550	3/1a	12	0.890	557	633	1.14	13.3	-	-
	RD TMT Fe 550	3/1b	12	0.887	-	-	-	-	No Rupture or Crack Visible	-
	RD TMT Fe 550	3/1c	12	0.890	-	-	-	-	-	No Rupture or Crack Visible

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the IS 1786 : 2008 Specification/Project Requirement.

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Checked by :



Date: 04.05.2022

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
 Address: Yelahanka Division
 Package No: Package - 08
 Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
 Name of Contractor: SRI SAI CONSTRUCTION
 Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
 Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 7 days Compressive Strength
 Source: Casted & collected from site
 Reference to BIS codes: Test Method:
 IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete CI 5
 Specification:
 IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice
 Condition of sample: Satisfactory
 Compressive strength : Min 13.33 N/mm² as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl. No	Sample Identification on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
1	1/1	Bettahalli Layout 9th Main Road LHS	M-20	26-Mar-22	02-Apr-22	150*150*150	22500	8580	338	15.03	14.8
	1/2	Bettahalli Layout 9th Main Road LHS	M-20	26-Mar-22	02-Apr-22	150*150*150	22500	8518	342	15.20	
	1/3	Bettahalli Layout 9th Main Road LHS	M-20	26-Mar-22	02-Apr-22	150*150*150	22500	8468	320	14.23	
2	1/1	Bettahalli Layout 8th Cross	M-20	29-Mar-22	05-Apr-22	150*150*150	22500	8549	336	14.94	14.7
	1/2	Bettahalli Layout 8th Cross	M-20	29-Mar-22	05-Apr-22	150*150*150	22500	8471	320	14.23	
	1/3	Bettahalli Layout 8th Cross	M-20	29-Mar-22	05-Apr-22	150*150*150	22500	8566	337	14.98	
3	1/1	Bettahalli Layout 7th Sub Cross	M-20	31-Mar-22	07-Apr-22	150*150*150	22500	8519	325	14.98	15.0
	1/2	Bettahalli Layout 7th Sub Cross	M-20	31-Mar-22	07-Apr-22	150*150*150	22500	8438	371	16.49	

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Sl. No	Sample Identification on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
4	1/3	Bettahalli Layout 7th Sub Cross	M-20	31-Mar-22	07-Apr-22	150*150*150	22500	8453	315	14.00	14.9
	1/1	Bettahalli Layout 6th C Cross	M-20	01-Apr-22	08-Apr-22	150*150*150	22500	8433	311	13.83	
	1/2	Bettahalli Layout 6th C Cross	M-20	01-Apr-22	08-Apr-22	150*150*150	22500	8470	366	16.27	
	1/3	Bettahalli Layout 6th C Cross	M-20	01-Apr-22	08-Apr-22	150*150*150	22500	8424	330	14.67	
5	1/1	Bettahalli Layout 6th E Sub Cross (3)	M-20	02-Apr-22	09-Apr-22	150*150*150	22500	8547	375	16.67	16.1
	1/2	Bettahalli Layout 6th E Sub Cross (3)	M-20	02-Apr-22	09-Apr-22	150*150*150	22500	8443	344	15.29	
	1/3	Bettahalli Layout 6th E Sub Cross (3)	M-20	02-Apr-22	09-Apr-22	150*150*150	22500	8491	365	16.23	
6	1/1	Bettahalli Layout 6th E Cross	M-20	03-Apr-22	10-Apr-22	150*150*150	22500	8425	328	14.58	14.7
	1/2	Bettahalli Layout 6th E Cross	M-20	03-Apr-22	10-Apr-22	150*150*150	22500	8510	302	13.43	
	1/3	Bettahalli Layout 6th E Cross	M-20	03-Apr-22	10-Apr-22	150*150*150	22500	8548	360	16.00	
7	1/1	Bettahalli Layout 6th E Sub Cross (1)	M-20	04-Apr-22	11-Apr-22	150*150*150	22500	8495	358	15.92	15.1
	1/2	Bettahalli Layout 6th E Sub Cross (1)	M-20	04-Apr-22	11-Apr-22	150*150*150	22500	8435	349	15.46	
	1/3	Bettahalli Layout 6th E Sub Cross (1)	M-20	04-Apr-22	11-Apr-22	150*150*150	22500	8499	312	13.87	
8	1/1	Bettahalli Layout 6th E Sub Cross (2)	M-20	05-Apr-22	12-Apr-22	150*150*150	22500	8485	313	13.92	15.0
	1/2	Bettahalli Layout 6th E Sub Cross (2)	M-20	05-Apr-22	12-Apr-22	150*150*150	22500	8432	353	15.69	

Kamala Nivasa,

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1st main, 2nd Cross, Krushinaagar, Shimoga 577204, Karnataka.



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Sl. No	Sample Identification on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
14	1/2	Nanjundeshwara Layout 2nd Main	M-20	11-Apr-22	18-Apr-22	150*150*150	22500	8427	367	16.32	15.6
	1/3	Nanjundeshwara Layout 2nd Main	M-20	11-Apr-22	18-Apr-22	150*150*150	22500	8521	331	14.72	
15	1/1	Nanjundeshwara Layout 3rd Main	M-20	12-Apr-22	19-Apr-22	150*150*150	22500	8598	365	16.23	15.2
	1/2	Nanjundeshwara Layout 3rd Main	M-20	12-Apr-22	19-Apr-22	150*150*150	22500	8566	356	15.83	
	1/3	Nanjundeshwara Layout 3rd Main	M-20	12-Apr-22	19-Apr-22	150*150*150	22500	8414	306	13.60	
16	1/1	Aditya Nagar 9th Main 7th B Cross	M-20	13-Apr-22	20-Apr-22	150*150*150	22500	8518	334	14.85	14.7
	1/2	Aditya Nagar 9th Main 7th B Cross	M-20	13-Apr-22	20-Apr-22	150*150*150	22500	8552	328	14.58	
	1/3	Aditya Nagar 9th Main 7th B Cross	M-20	13-Apr-22	20-Apr-22	150*150*150	22500	8468	328	14.58	
17	1/1	Aditya Nagar 9th Main 8th B Cross	M-20	14-Apr-22	21-Apr-22	150*150*150	22500	8545	372	16.54	15.8
	1/2	Aditya Nagar 9th Main 8th B Cross	M-20	14-Apr-22	21-Apr-22	150*150*150	22500	8465	359	15.96	
	1/3	Aditya Nagar 9th Main 8th B Cross	M-20	14-Apr-22	21-Apr-22	150*150*150	22500	8532	335	14.89	
18	1/1	Aditya Nagar 9th Main 9th A Cross	M-20	15-Apr-22	22-Apr-22	150*150*150	22500	8575	347	15.43	15.0
	1/2	Aditya Nagar 9th Main 9th A Cross	M-20	15-Apr-22	22-Apr-22	150*150*150	22500	8444	303	13.47	
	1/3	Aditya Nagar 9th Main 9th A Cross	M-20	15-Apr-22	22-Apr-22	150*150*150	22500	8487	365	16.23	

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Sl. No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
	1/3	Aditya Nagar 9th Main 10th Cross Culvert	M-20	20-Apr-22	27-Apr-22	150*150*150	22500	8521	311	13.83	
24	1/1	AMS Extension 8th A Main Road	M-20	21-Apr-22	28-Apr-22	150*150*150	22500	8587	310	13.78	14.7
	1/2	AMS Extension 8th A Main Road	M-20	21-Apr-22	28-Apr-22	150*150*150	22500	8597	361	16.05	
	1/3	AMS Extension 8th A Main Road	M-20	21-Apr-22	28-Apr-22	150*150*150	22500	8576	322	14.32	
25	1/1	Masjid Right Side Road	M-20	22-Apr-22	29-Apr-22	150*150*150	22500	8587	373	16.58	15.6
	1/2	Masjid Right Side Road	M-20	22-Apr-22	29-Apr-22	150*150*150	22500	8495	351	15.60	
	1/3	Masjid Right Side Road	M-20	22-Apr-22	29-Apr-22	150*150*150	22500	8542	331	14.72	
26	1/1	Masjid Left Side Road	M-20	23-Apr-22	30-Apr-22	150*150*150	22500	8451	316	14.05	15.0
	1/2	Masjid Left Side Road	M-20	23-Apr-22	30-Apr-22	150*150*150	22500	8404	369	16.40	
	1/3	Masjid Left Side Road	M-20	23-Apr-22	30-Apr-22	150*150*150	22500	8540	327	14.54	
27	1/1	2nd Main Road	M-20	24-Apr-22	01-May-22	150*150*150	22500	8454	367	16.32	15.6
	1/2	2nd Main Road	M-20	24-Apr-22	01-May-22	150*150*150	22500	8500	341	15.16	

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Amala Nivasa,

main, 2nd Cross, Krushinaqar, Shimoqa 577204, Karnataka.

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Sl. No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
	1/3	2nd Main Road	M-20	24-Apr-22	01-May-22	150*150*150	22500	8551	343	15.25	
28	1/1	Mubarak Store Opposite side	M-20	25-Apr-22	02-May-22	150*150*150	22500	8528	331	14.72	14.7
	1/2	Mubarak Store Opposite side	M-20	25-Apr-22	02-May-22	150*150*150	22500	8528	352	15.65	
	1/3	Mubarak Store Opposite side	M-20	25-Apr-22	02-May-22	150*150*150	22500	8504	311	13.83	
29	1/1	Masjid surrounding area Drain parallel to Cross road at Ch.33.5 culvert of 2nd Main Road	M-20	25-Apr-22	02-May-22	150*150*150	22500	8535	341	15.16	14.5
	1/2	Masjid surrounding area Drain parallel to Cross road at Ch.33.5 culvert of 2nd Main Road	M-20	25-Apr-22	02-May-22	150*150*150	22500	8594	315	14.00	
	1/3	Masjid surrounding area Drain parallel to Cross road at Ch.33.5 culvert of 2nd Main Road	M-20	25-Apr-22	02-May-22	150*150*150	22500	8567	324	14.40	

Remarks:

The tested samples meets the requirements of IS 456 : 2000 with respect to above tests conducted.

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Checked by :



Date : 25.05.2022

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Gridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division.
(PACKAGE NO-08)

Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 20 / 28 days Compressive Strength

Source: Casted & collected from site

Reference to BIS codes: Test Method
IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete CI 5
Specification:

IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Condition of sample: Satisfactory

Compressive strength : Min 20 N/mm² as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl. No	Sample Identification on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
1	1/1	Bettahalli Layout 9th Main Road LHS	M-20	26-Mar-22	23-Apr-22	150*150*150	22500	8468	475	21.12	21.0
	1/2	Bettahalli Layout 9th Main Road LHS	M-20	26-Mar-22	23-Apr-22	150*150*150	22500	8504	490	21.78	
	1/3	Bettahalli Layout 9th Main Road LHS	M-20	26-Mar-22	23-Apr-22	150*150*150	22500	8423	455	20.23	
2	1/1	Bettahalli Layout 8th Cross	M-20	29-Mar-22	26-Apr-22	150*150*150	22500	8471	470	20.89	21.5
	1/2	Bettahalli Layout 8th Cross	M-20	29-Mar-22	26-Apr-22	150*150*150	22500	8558	520	23.12	
	1/3	Bettahalli Layout 8th Cross	M-20	29-Mar-22	26-Apr-22	150*150*150	22500	8547	460	20.45	
3	1/1	Bettahalli Layout 7th Sub Cross	M-20	31-Mar-22	28-Apr-22	150*150*150	22500	8524	450	20.00	21.0
	1/2	Bettahalli Layout 7th Sub Cross	M-20	31-Mar-22	28-Apr-22	150*150*150	22500	8597	485	21.56	

Kamala Nivasa,
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Nandi Consultants

Date : 10.06.2022

TEST REPORT ON CEMENT CONCRETE CUBES

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Sample Identification*: C C Cube / 150mmx150mmx150mm / M - 30 / 07 days Compressive Strength
Source: Casted & collected from site
Reference to BIS codes: **Test Method:**

IS 516 : 1959 (RA 2018) Methods Of Tests For Strength Of Concrete Cl.5

Specification:

IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Condition of sample:

Satisfactory

Compressive strength : Min 20 N/mm² as per IS 456 : 2000 (RA 2016) Plain And Reinforced Concrete - Code Of Practice

Sl. No	Sample Identificati on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compress ive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
1	1/1	Aditya Nagar 3rd Cross	M-30	20-May-22	27-May-22	150*150 *150	22500	8433	490	21.78	21.4
	1/2	Aditya Nagar 3rd Cross	M-30	20-May-22	27-May-22	150*150 *150	22500	8551	460	20.45	
	1/3	Aditya Nagar 3rd Cross	M-30	20-May-22	27-May-22	150*150 *150	22500	8488	495	22.00	
2	1/1	Aditya Nagar 4th Cross	M-30	21-May-22	28-May-22	150*150 *150	22500	8577	475	21.12	20.6
	1/2	Aditya Nagar 4th Cross	M-30	21-May-22	28-May-22	150*150 *150	22500	8414	455	20.23	
	1/3	Aditya Nagar 4th Cross	M-30	21-May-22	28-May-22	150*150 *150	22500	8421	460	20.45	

Handwritten signature and stamp of the Executive Engineer, Bruhat Bangalore Mahanagara Palike, Yelahanka Division. The stamp includes the text "10.06.22, 10:00 AM" and "100".

Handwritten signature of the contractor, SRI SAI CONSTRUCTION.



Nandi Consultants

Sl. No	Sample Identification on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
3	1/1	Aditya Nagar 5th Cross	M-30	23-May-22	30-May-22	150*150*150	22500	8596	490	21.78	21.6
	1/2	Aditya Nagar 5th Cross	M-30	23-May-22	30-May-22	150*150*150	22500	8415	475	21.12	
	1/3	Aditya Nagar 5th Cross	M-30	23-May-22	30-May-22	150*150*150	22500	8550	495	22.00	
4	1/1	Aditya Nagar 6th Cross	M-30	24-May-22	31-May-22	150*150*150	22500	8451	490	21.78	21.1
	1/2	Aditya Nagar 6th Cross	M-30	24-May-22	31-May-22	150*150*150	22500	8424	460	20.45	
	1/3	Aditya Nagar 6th Cross	M-30	24-May-22	31-May-22	150*150*150	22500	8454	475	21.12	
5	1/1	Aditya Nagar 7th Cross	M-30	26-May-22	02-Jun-22	150*150*150	22500	8596	460	20.45	20.5
	1/2	Aditya Nagar 7th Cross	M-30	26-May-22	02-Jun-22	150*150*150	22500	8437	465	20.67	
	1/3	Aditya Nagar 7th Cross	M-30	26-May-22	02-Jun-22	150*150*150	22500	8438	455	20.23	
6	1/1	Nanjundeshwara Layout 1st Main	M-30	27-May-22	03-Jun-22	150*150*150	22500	8401	475	21.12	21.6
	1/2	Nanjundeshwara Layout 1st Main	M-30	27-May-22	03-Jun-22	150*150*150	22500	8544	495	22.00	
	1/3	Nanjundeshwara Layout 1st Main	M-30	27-May-22	03-Jun-22	150*150*150	22500	8423	485	21.56	

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Shimoga
27.05.2022



Sl. No	Sample Identification on mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
7	1/1	Nanjundeswara Layout 1st Cross	M-30	26-May-22	04-Jun-22	150*150*150	22500	8498	460	20.45	21.3
	1/2	Nanjundeswara Layout 1st Cross	M-30	26-May-22	04-Jun-22	150*150*150	22500	8531	485	21.56	
	1/3	Nanjundeswara Layout 1st Cross	M-30	26-May-22	04-Jun-22	150*150*150	22500	8528	490	21.78	
8	1/1	Nanjundeswara Layout 2nd Main	M-30	30-May-22	06-Jun-22	150*150*150	22500	8481	490	21.78	21.7
	1/2	Nanjundeswara Layout 2nd Main	M-30	30-May-22	06-Jun-22	150*150*150	22500	8510	480	21.34	
	1/3	Nanjundeswara Layout 2nd Main	M-30	30-May-22	06-Jun-22	150*150*150	22500	8465	495	22.00	
9	1/1	Nanjundeswara Layout 3rd Main	M-30	30-May-22	06-Jun-22	150*150*150	22500	8408	490	21.78	21.3
	1/2	Nanjundeswara Layout 3rd Main	M-30	30-May-22	06-Jun-22	150*150*150	22500	8511	460	20.45	
	1/3	Nanjundeswara Layout 3rd Main	M-30	30-May-22	06-Jun-22	150*150*150	22500	8507	485	21.56	
10	1/1	Bettahalli Layout 6th E Sub Cross (3)	M-30	31-May-22	07-Jun-22	150*150*150	22500	8588	480	21.34	20.9
	1/2	Bettahalli Layout 6th E Sub Cross (3)	M-30	31-May-22	07-Jun-22	150*150*150	22500	8469	475	21.12	
	1/3	Bettahalli Layout 6th E Sub Cross (3)	M-30	31-May-22	07-Jun-22	150*150*150	22500	8520	455	20.23	
11	1/1	Bettahalli Layout Mariamma Temple Road	M-30	31-May-22	07-Jun-22	150*150*150	22500	8565	460	20.45	21.0
	1/2	Bettahalli Layout Mariamma Temple Road	M-30	31-May-22	07-Jun-22	150*150*150	22500	8520	480	21.34	
	1/3	Bettahalli Layout Mariamma Temple Road	M-30	31-May-22	07-Jun-22	150*150*150	22500	8507	480	21.34	



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 Bangalore 577304, Karnataka.



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Sl. No	Sample Identification mark on CC Cubes	Location	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of cube (grams)	Failure Load (kN)	Compressive strength (N/mm ²)	Average Compressive strength of 3 Cubes (N/mm ²)
12	1/1	AMS Extension 7th A Main Road	M-30	01-Jun-22	08-Jun-22	150*150*150	22500	8558	475	21.12	21.6
	1/2	AMS Extension 7th A Main Road	M-30	01-Jun-22	08-Jun-22	150*150*150	22500	8558	485	21.56	
	1/3	AMS Extension 7th A Main Road	M-30	01-Jun-22	08-Jun-22	150*150*150	22500	8491	495	22.00	
13	1/1	AMS Extension 8th A Main Road	M-30	01-Jun-22	08-Jun-22	150*150*150	22500	8506	475	21.12	21.0
	1/2	AMS Extension 8th A Main Road	M-30	01-Jun-22	08-Jun-22	150*150*150	22500	8414	480	21.34	
	1/3	AMS Extension 8th A Main Road	M-30	01-Jun-22	08-Jun-22	150*150*150	22500	8434	460	20.45	

Remarks:

The tested samples meets the requirements of IS 456 : 2000 with respect to above tests conducted.

Checked by :



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08.06.22

Date :

03.06.2022

TEST REPORT OF GRADATION FOR GSB

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Girdhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division (PACKAGE NO-08)

Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Date of Sample Collection: 30.05.2022
Chainage/Location/Land Mark: Sample collected & Tested at site (Aditya Nagar 9th Main Road 10th Cross)
Date of testing: 30.05.2022
Reference to BIS codes: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape CI 2
Layer: GSB

Wt of sample taken (gm): 10000

SI No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	As per MORTH 5th Revision Table 400.1 (Garding V)
1	75	0	0	0.00	100.00	100
2	53	966	966	9.66	90.34	80-100
3	26.5	1742	2708	27.08	72.92	55-90
4	9.5	2243	4951	49.51	50.49	35-65
5	4.75	823	5774	57.74	42.26	25-50
6	2.36	2716	8490	84.90	15.10	10-20
7	0.85	1003	9493	94.93	5.07	2-10
8	0.425	233	9726	97.26	2.74	0-5
9	pan	274	10000	100.00	0.00	-

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Checked by:

Kamala Nivasa,
1st main, 2nd Cross, Krushinagar, Shimoga 577204, Karnataka.

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FIELD DENSITY TEST BY SAND REPLACEMENT METHOD

Name of Client: Bruhat Bangalore Mahanagara Palike
 Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
 Name of Contractor: SRI SAI CONSTRUCTION
 Name of PMC: Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
 Job Code: 003-22-000009
 Source of sample: Tested at site

Layer: GSB
 Date of testing: 10.06.2022
 Max. Dry Density (S) (g/cc) 2.10
 Optimum Moisture Content (%) 8.50
 Bulk Density of Sand (Q)(g/cc) 1.44
 Wt. of Sand in Cones (A) gms 870

DETERMINATION OF WET DENSITY

Test Holes No's	1	2	3	4	5
Location/Land Mark	Bettahalli Layout 7th Sub Cross	Bettahalli Layout Aishwarya Bakery Road 6th Cross	Aditya Nagar 9th Main Road 10th Cross		
Chainage	32.00	54.00	74.00		
Wt. of Wet material from hole (gm) (B)	9328	9363	9225		
Wt. of Cylinder+Sand before pouring (gm) (C)	16850	16850	16850		
Wt. of Cylinder+Sand after pouring (gm) (D)	7522	7487	7625		
Wt. of Sand in Hole & Cone (gm) (E)	6870	6860	6846		
Wt. of Sand in Hole (gm) (F=E-A)	6000	5990	5976		
Volume of Sand in Hole (G=F/Q)	4167	4160	4150		
Wet Density of Material (g/cc) (H=B/G)	2.24	2.25	2.22		
Moisture Content (%)	7.5	7.5	7		

DETERMINATION OF DRY DENSITY

Field dry Density (g/cc)	2.08	2.09	2.08		
Field compaction achieved (%)	99.17	99.71	98.93		
Required Compaction (%)	98.00	98.00	98.00		

Handwritten signature and stamp of Nandi Consultants, Shimoga. The stamp includes the text "NANDI CONSULTANTS SHIMOGA" and "Karnataka".

Checked By



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1st main, 2nd Cross, Krushinagar, Shimoga 577204, Karnataka.



DETERMINATION OF FLAKINESS AND ELONGATION INDEX

Name of Client: Bruhat Bangalore Mahanagara Palike
 Address: Yelahanka Division
 Package No: Package - 08
 Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no-03 of Yelahanka New town Sub division. (PACKAGE NO-08)
 Name Contractor: SRI SAI CONSTRUCTION
 Name of PMC: Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
 Date of sample Collection: 10-Jun-22
 Chainage/Location/ Landmark: Sample collected from the site and Tested (Aditya Nagar 9th Main Road 10th Cross)
 Date of Testing: 11-Jun-22
 Reference to IS Code: IS 2386 (Part 1):1963(RA 2016)
 Layer: WMM

Size of Aggregates		Flakiness Index						Elongation Index				
Passing through IS sieves	Retained on IS sieves	Thickness gauge size	Weight of aggregate taken in each fraction	Fraction retained in the whole sample	Weight of aggregate in each fraction passing the thickness gauge.	Percent passing the gauge (100*(6/4)	Flakiness Index (7*5)	Length gauge size	Weight of aggregate taken in each fraction	Weight of aggregate in each fraction retained on length gauge	Percent NOT passing the gauge (100*(11/10)	Elongation Index (5*12)
(mm)	(mm)	(mm)	(grams)	(Percent)	(grams)			(mm)	(grams)	(grams)		
1	2	3	4	5	6	7	8	9	10	11	12	
63	50	33.90						81.00				
50	40	27.00										
40	31.5	21.50	3248	25.43	179	5.51	140.13	64.40	3248	76	2.34	75.08
31.5	25	16.95	2652	20.76	129	4.86	100.99	—	—	—	—	
25	20	13.50	2015	15.77	236	11.71	184.75	40.50	2015	175	8.68	172.89
20	16	10.80	1869	14.63	359	19.21	281.04	32.40	1869	184	9.84	181.78
16	12.5	8.55	1261	9.87	180	14.27	140.91	25.60	1261	280	22.20	276.63
12.5	10	6.75	921	7.21	129	14.01	100.99	20.20	921	269	29.21	265.76
10	6.3	4.89	808	6.33	79	9.78	61.84	14.70	808	173	21.41	170.91
TOTAL:			12774	100	1291	79.35	1010.65	TOTAL:	10122	1157.00	93.69	1143.05

Flakiness Index: 10.11 %
 Elongation Index: 11.43 %
 Combined Flakiness & Elongation Index: 22 %

The tested sample is found to be Satisfactory as it meets the requirements of MORTH specification/Project Requirement

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 11.06.22



Checked By

DETERMINATION OF AGGREGATE IMPACT VALUE

Name of Client: Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
Name Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Date of sample Collection: 10-Jun-22
Chainage/Location/ Landmark: Sample collected from the site and Tested (Aditya Nagar 9th Main Road 10th Cross)
Date of Testing: 11-Jun-22
Reference to BIS codes: IS 2386 (Part IV) - 1963 (RA 2016)
Layer: WMM

Particulars of observations	TEST (1)	TEST (2)
Total weight of Surface dry sample (passing 12.5 mm sieve and retained on 10 mm sieve) = (A)	365	369
Weight of fraction passing 2.36 mm sieve after giving 15 blows = (B)	91	100
Weight of fraction retained 2.36 mm sieve after giving 15 blows = (C)	274	269
Aggrgate Impact value = $(B/A) \times 100$	24.8	27.1

Aggregate Impact value (mean of two tests) = 26.0
Nearest to whole number = 26%

Remarks:

The tested sample is found to be Satisfactory as it meets the requirements of MORTH specification/Project Requirement

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9.9.22, 10.07.2022-100

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Checked by:

Date :

10.06.2022

TEST REPORT OF GRADATION FOR WET MIX MACADAM

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Date of Sample Collection: 09.06.2022
Chainage/Location/ Mark: Sample collected & Tested at site (Bettahalli Layout 7th Sub Cross)
Date of testing: 09.06.2022
BIS Code: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape CI 2
Layer: WMM

Wt of sample taken (gm): 10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits Vide Table 400.13 as Per MORTH Specification
1	53	0	0	0.00	100	100
2	45	385	385	3.85	96.15	95-100
3	22.4	3200	3585	35.85	64.15	60-80
4	11.2	1575	5160	51.60	48.40	40-60
5	4.75	2121	7281	72.81	27.19	25-40
6	2.36	986	8267	82.67	17.33	15-30
7	0.600	607	8874	88.74	11.26	8-22
8	0.075	857	9731	97.31	2.69	0-5

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

AG
SRI SAI CONSTRUCTION
Bettahalli Layout 7th Sub Cross
Shimoga-577204

B



Checked by:

Date :

11.06.2022

TEST REPORT OF GRADATION FOR WET MIX MACADAM

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Date of Sample Collection: 10.06.2022
Chainage/Location/ Mark: Sample collected & Tested at site (Bettahalli Layout Aishwarya Bakery Road 6th Cross)
Date of testing: 10.06.2022
BIS Code: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape Cl.2
Layer: WMM

Wt of sample taken (gm). 10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits Vide Table 400.13 as Per MORTH Specification
1	53	0	0	0.00	100	100
2	45	201	201	2.01	97.99	95-100
3	22.4	2682	2883	28.83	71.17	60-80
4	11.2	1917	4800	48.00	52.00	40-60
5	4.75	2159	6959	69.59	30.41	25-40
6	2.36	955	7914	79.14	20.86	15-30
7	0.600	912	8826	88.26	11.74	8-22
8	0.075	857	9683	96.83	3.17	0-5

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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Checked by:



Date :

13.06.2022

TEST REPORT OF GRADATION FOR WET MIX MACADAM

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Gridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Date of Sample Collection: 11.06.2022
Chainage/Location/ Mark: Sample collected & Tested at site (Aditya Nagar 9th Main Road 10th Cross)
Date of testing: 11.06.2022
BIS Code: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape CI 2
Layer: WMM

Wt of sample taken (gm): 10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits Vide Table 400.13 as Per MORTH Specification
1	53	0	0	0.00	100	100
2	45	311	311	3.11	96.89	95-100
3	22.4	2288	2599	25.99	74.01	60-80
4	11.2	2065	4664	46.64	53.36	40-60
5	4.75	2180	6844	68.44	31.56	25-40
6	2.36	991	7835	78.35	21.65	15-30
7	0.600	889	8724	87.24	12.76	8-22
8	0.075	815	9539	95.39	4.61	0-5

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

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B.

Checked by:



Date :

14.06.2022

TEST REPORT OF GRADATION FOR WET MIX MACADAM

Name of Client: Executive Engineer Bruhat Bangalore Mahanagara Palike
Address: Yelahanka Division
Package No: Package - 08
Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
Name of Contractor: SRI SAI CONSTRUCTION
Name of PMC: M/s Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
Date of Sample Collection: 13.06.2022
Chainage/Location/ Mark: Sample collected & Tested at site (AMS Extension Al Haj Syed Yakhub Sab Layout)
Date of testing: 13.06.2022
BIS Code: IS 2386 (Part 1):1963 (RA 2016) Particle Size and Shape CI 2
Layer: WMM

Wt of sample taken (gm)

10000

Sl No	Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits Vide Table 400.13 as Per MORTH Specification
1	53	0	0	0.00	100	100
2	45	399	399	3.99	96.01	95-100
3	22.4	2396	2795	27.95	72.05	60-80
4	11.2	1445	4240	42.40	57.60	40-60
5	4.75	2112	6352	63.52	36.48	25-40
6	2.36	945	7297	72.97	27.03	15-30
7	0.600	752	8049	80.49	19.51	8-22
8	0.075	1553	9602	96.02	3.98	0-5

Remarks:

The tested sample is found to be satisfactory as it meets the requirements of the MORTH Specification/Project Requirement.

Handwritten signature and stamp of the testing authority.

Handwritten signature.

Checked by:



FIELD DENSITY TEST BY SAND REPLACEMENT METHOD

Name of Client: Bruhat Bangalore Mahanagara Palike
 Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
 Name of Contractor: SRI SAI CONSTRUCTION
 Name of PMC: Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
 Job Code: 003-22-000009
 Source of sample: Tested at site

Layer: WMM
 Date of testing: 10.06.2022
 Max. Dry Density (S) (g/cc) 2.20
 Optimum Moisture Content (%) 7.50
 Bulk Density of Sand (Q)(g/cc) 1.35
 Wt. of Sand in Cones (A) gms 870

DETERMINATION OF WET DENSITY

Test Holes No's	1	2	3	4	5
Location/Land Mark	Bettahalli Layout 7th Sub Cross	Bettahalli Layout 7th Sub Cross	Bettahalli Layout 7th Sub Cross	Bettahalli Layout Aishwarya Bakery Road 6th Cross	Bettahalli Layout Aishwarya Bakery Road 6th Cross
Chainage	12.00	21.00	18.00	37.00	45.00
Wt. of Wet material from hole (gm) (B)	10386	10365	10291	10370	10358
Wt. of Cylinder+Sand before pouring (gm) (c)	16850	16850	16850	16850	16850
Wt. of Cylinder+Sand after pouring (gm) (D)	6464	6485	6559	6480	6492
Wt. of Sand In Hole & Cone (gm) (E)	6886	6886	6809	6861	6828
Wt. of Sand In Hole (gm) (F=E-A)	6016	6016	5939	5991	5958
Volume of Sand In Hole (G=F/Q)	4456	4456	4399	4438	4413
Wet Density of Material (g/cc) (H=B/G)	2.33	2.33	2.34	2.34	2.35
Moisture Content (%)	7.5	6	6.5	6.5	7

DETERMINATION OF DRY DENSITY

Field dry Density (g/cc)	2.17	2.19	2.20	2.19	2.19
Field compaction achieved (%)	98.55	99.74	99.84	99.73	99.70
Required Compaction (%)	98.00	98.00	98.00	98.00	98.00

Checked By



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 1st main, 2nd Cross, Krushinagar, Shimoga-577204, Karnataka.

Kamala Nivasa,
 1st main, 2nd Cross, Krushinagar, Shimoga 577204, Karnataka.

9880770762, 9980160007



FIELD DENSITY TEST BY SAND REPLACEMENT METHOD

Name of Client: Bruhat Bangalore Mahanagara Palike
 Name of Work: Restoration and Improvements of roads at MS Palya, Aishwarya Bakery road, Giridhamanagara and surrounding areas in Ward no- 03 of Yelahanka New town Sub division. (PACKAGE NO-08)
 Name of Contractor: SRI SAI CONSTRUCTION
 Name of PMC: Nandi Consultants, 1st Main, 2nd Cross, Krushinagar, Shimoga-577204
 Job Code: 003-22-000009
 Source of sample: Tested at site

Layer: WMM
 Date of testing: 13.06.2022
 Max Dry Density (S) (g/cc): 2.20
 Optimum Moisture Content (%): 7.50
 Bulk Density of Sand (Q)(g/cc): 1.35
 Wt. of Sand in Cones (A) gms: 870

DETERMINATION OF WET DENSITY

Test Holes No's	1	2	3	4	5
Location/Land Mark	Aditya Nagar 9th Main Road 10th Cross	Aditya Nagar 9th Main Road 10th Cross	AMS Extension Al Haj Syed Yakhub Sab Layout	AMS Extension Al Haj Syed Yakhub Sab Layout	AMS Extension Al Haj Syed Yakhub Sab Layout
Chainage	35.00	59.00	32.00	74.00	105.00
Wt. of Wet material from hole (gm) (B)	10324	10268	10279	10272	10315
Wt. of Cylinder+Sand before pouring (gm) (C)	16850	16850	16850	16850	16850
Wt. of Cylinder+Sand after pouring (gm) (D)	6526	6582	6571	6578	6535
Wt. of Sand in Hole & Cone (gm) (E)	6812	6822	6816	6872	6815
Wt. of Sand in Hole (gm) (F=E-A)	5942	5952	5946	6002	5945
Volume of Sand in Hole (G=F/Q)	4401	4409	4404	4446	4404
Wet Density of Material (g/cc) (H=B/G)	2.35	2.33	2.33	2.31	2.34
Moisture Content (%)	7.5	7.5	6.5	7	7

DETERMINATION OF DRY DENSITY

Field dry Density (g/cc)	2.18	2.17	2.19	2.16	2.19
Field compaction achieved (%)	99.18	98.47	99.61	98.15	99.50
Required Compaction (%)	98.00	98.00	98.00	98.00	98.00

Checked By



Handwritten signature and text:
 K. N. Nivasa,
 1st main, 2nd Cross, Krushinagar, Shimoga 577204, Karnataka.

9880770762, 9980160007

1st main, 2nd Cross, Krushinagar, Shimoga 577204, Karnataka.

